DOE NEWS

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Richardson to Close Brookhaven Research Reactor

Secretary of Energy Bill Richardson today announced that the High Flux Beam Reactor (HFBR) at the Department of Energy's Brookhaven National Laboratory on Long Island will be permanently closed. HFBR is a 60 megawatt research reactor that began operation in 1965 and has provided scientists with neutron beams for research in materials sciences, chemistry, physics, structural biology and medicine. The research reactor has remained closed since December 1996 when it was shut down for normal refueling and its restart delayed after a small amount of radioactive tritium was discovered in an aquifer beneath the reactor.

"This was a difficult decision for me and I consulted with scientists, the community, members of Congress and other elected officials," said Secretary Richardson. "Extremely valuable research has been done at this reactor in its 30 years of operation, but it would take years and be costly to restart. DOE has been actively upgrading the technical capabilities and user capacities of all its neutron science facilities so that they can meet the growing demand for this kind of research. While I don't believe the Brookhaven reactor is a threat to the public or the environment, we need to focus our limited resources on productive research rather than keeping the reactor in standby mode for an unknown length of time."

Congress for three years in a row has prohibited the department from restarting the HFBR and keeping it in standby status costs nearly $23 million a year. Officials estimate that it would take until 2002 at the earliest to finish the environmental review, restart the reactor and make it operational for research again. The draft Environmental Impact Statement (EIS) that has been under review in the department is no longer necessary because DOE is moving directly to close the reactor.

"Laboratory director John Marburger has agreed to take all necessary steps to mitigate the job impacts of the reactor's shutdown," Richardson said. Brookhaven Laboratory researchers who have done research at the HFBR will continue to be supported and will conduct their research at other facilities. Until 1996 scientists from more than 70 institutions in academia and industry have used the HFBR each year for research.

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"The Department of Energy is deeply committed to Brookhaven Lab and the lab has a strong future," Richardson said. "For example, the Relativistic Heavy Ion Collider that I helped dedicate last month will be a world center for nuclear physics. Similarly, the new and planned upgrades to the lab's National Synchrotron Light Source will help that facility remain at the forefront of science for years to come."

The department is improving all of its facilities that contribute to the nation's neutron science program as well as building a major new facility. The Spallation Neutron Source, an accelerator-based neutron source, is under construction at the Department of Energy's Oak Ridge National Laboratory in Tennessee and will be more than 10 times as powerful as the best spallation neutron source now in existence. SNS will help meet the nation's need for neutron science capabilities well into the next century.

The department is also upgrading the High Flux Isotope Reactor at its Oak Ridge National Laboratory. Improvements include larger beam tubes and shutters, a high-performance hydrogen cold source and new and upgraded neutron scattering instrumentation. Instruments that use the cold source will be housed in a newly constructed experimental building that is removed from the reactor's core, which will reduce the background "noise." The improvements will be undertaken during an extended planned reactor outage in Fiscal Year 2000 and will increase the reactor's research capacity from about 250 to about 700 users.

Upgrades to the LANSCE neutron scattering facility at the department's Los Alamos National Laboratory in New Mexico are in progress. The upgrade will increase its power to that of ISIS in the United Kingdom, which is currently the world's most powerful spallation source. The upgrade will also provide a new suite of state-of-the art instruments for neutron scattering research at the Manuel Lujan Jr. Scattering Center at LANSCE. The upgrades will double that center's power and increase user capacity from about 100 to about 300 researchers.

The department's Argonne National Laboratory in Illinois is improving the productivity of its Intense Pulse Neutron Source (IPNS) by upgrading the instruments as well as the target and moderator systems. The IPNS remains one of the most reliable facilities operated by the department.

The HFBR was shut down for routine maintenance in December 1996. In January 1997, tritium was discovered in the ground water aquifer underneath the reactor. The source of the leak was traced to the indoor storage pool used to hold the reactor's spent fuel rods. The contamination has been contained to laboratory property and a groundwater extraction system was installed in 1997 to ensure that the contaminated water does not leave the laboratory site. The Suffolk County Health Department, U.S. Environmental Protection Agency and the Nuclear Regulatory Commission have stated that the tritium plume does not pose a health hazard to the public.

The reactor's spent fuel pool has been drained and the reactor's fuel has been removed as part of placing the reactor in standby mode. The department now will proceed with activities to prepare the reactor for permanent shutdown.

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